

# AZIMUTHAL CORRELATION OF $D\bar{D}$ MESONS BY HEAVY ION COLLISIONS AT HIGH ENERGIES

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## Abstract

The correlation of charmed  $D\bar{D}$  mesons produced by heavy ion-ion collisions at the central rapidity region ( $-1 < Y < 1$ ) is studied. The azimuthal correlation of two heavy quarks produced by hadron-nucleon collisions at the plane transverse to the beam has been analyzed in [1,2] and [3,4]. The sharp enhancement of the distribution of two  $D\bar{D}$  mesons over the azimuthal angles difference  $\Delta\varphi$  at  $\Delta\varphi = 0$  has been exhibited at these papers. This effect has been measured by *WA-92* and *BEATRICE* Collaborations [5] in  $\pi^-N$  collision at  $\sqrt{s} = 26$  GeV. The question arises what can be happened by heavy ion collisions at high energies. By calculating the  $D\bar{D}$  correlation within the approach developed in [6,7] and [8] a big suppression of this enhancement especially at LHC energy is shown. It is exhibited this effect can be caused by a possible formation of the QGP.

## References

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